



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Kouta Fukui : Group Art Unit: 1752
Application No. 10/756,407 : Examiner: Thorl Chea

Filed: January 14, 2004

For: PHOTOTHERMOGRAPHIC MATERIAL

DECLARATION UNDER 37 C.F.R. §1.132

Director of Patents and Trademarks

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Sir:

I, Kouta Fukui, do declare and state as follows:

I graduated from Tokyo Institute of Technology with a Master's Degree in Science and Engineering, Department of Electronic Chemistry in March 1990;

I joined Fuji Photo Film Co., Ltd. in April 1990, and since that time I have been engaged in research and development in the field of silver halide photosensitive material at Ashigara laboratories (currently Digital & Photo Imaging Materials Research Laboratories);

I am an inventor of the subject matter disclosed and claimed in the above-identified application; and

I am familiar with the Office Action of March 23, 2005, and

understand that the Examiner has rejected Claims 1, 4-16 under 35 U.S.C. §103(a) as being unpatentable over the combination of Goto (Pub. No. US2002/0039707), Siga et al (US Patent No. 4,332,889) and Toya et al (US Patent No. 5,998,216), and Claims 1 - 15 under 35 U.S.C. §103(a) as being unpatentable over the combination of Katoh (Pub. No. 2001/0038977), Siga et al (US Patent No. 4,332,889) and Toya et al (US Patent No. 5,998,126).

The following additional comparative experiments were carried out by me or under my supervision in order to make the advantages of the subject matter more clear.

Experiment 1

Silver halide emulsions D to L were prepared in the same manner as Silver halide emulsion A in Example 1 of the specification, except that the halogen composition was changed by changing the halogen composition of Silver halide emulsions 1 to 3. Photothermographic materials 101 to 118 were prepared in the same manner as Photothermographic material 1 or 3 in Table1, Example 1 of the specification, except that Silver halide emulsion A was changed to Silver halide emulsion D to L as shown in Table 100.

Performances of Photothermographic materials 101 to 118 thus obtained were evaluated in the same manner as in Example 1 of the specification.

The results obtained are listed in Table 101.

TABLE 100

Photo-thermographic material No.	Silver halide emulsion*	Silver iodide composition	Silver saving agent		Total silver amount (g/m ²)	Remark
			Compound No.	Amount (mol/Agmol)		
1	A	100	-	-	2.2	Comparative example
3	A	100	5-1-5	0.02	1.5	Invention
101	D	95	-	-	2.2	Comparative example
102	D	95	5-1-5	0.02	1.5	Invention
103	E	90	-	-	2.2	Comparative example
104	E	90	5-1-5	0.02	1.5	Invention
105	F	85	-	-	2.2	Comparative example
106	F	85	5-1-5	0.02	1.5	Invention
107	G	80	-	-	2.2	Comparative example
108	G	80	5-1-5	0.02	1.5	Invention
109	H	75	-	-	2.2	Comparative example
110	H	75	5-1-5	0.02	1.5	Invention
111	I	45	-	-	2.2	Comparative example
112	I	45	5-1-5	0.02	1.5	Invention
113	J	40	-	-	2.2	Comparative example
114	J	40	5-1-5	0.02	1.5	Invention
115	K	35	-	-	2.2	Comparative example
116	K	35	5-1-5	0.02	1.5	Comparative example
117	L	10	-	-	2.2	Comparative example
118	L	10	5-1-5	0.02	1.5	Comparative example

* The rest of the halogen composition is Silver bromide

TABLE 101

Photo-thermo-graphic material No.	Photographic performances			Film physical property	Unprocessed stock storability	Image storability	Remark
	Dmax	Gradation	Tone	(Brittleness)	(ΔD_{min})	(Print-out)	
1	4.0	2.6	Δ	\times	0.01	0	Comparative Example
3	4.0	2.6	O	O	0	0	Invention
101	4.0	2.6	Δ	\times	0	0	Comparative Example
102	4.0	2.6	O	O	0	0	Invention
103	4.0	2.6	Δ	\times	0	0	Comparative Example
104	4.0	2.6	O	O	0	0	Invention
105	4.0	2.6	Δ	\times	0	0	Comparative Example
106	4.0	2.6	O	O	0	0	Invention
107	4.0	2.6	Δ	\times	0	0	Comparative Example
108	4.0	2.6	O	O	0	0	Invention
109	4.0	2.6	Δ	\times	0.01	0.01	Comparative Example
110	4.0	2.6	O	O	0.01	0.01	Invention
111	4.0	2.6	Δ	\times	0.01	0.01	Comparative Example
112	4.0	2.6	O	O	0.01	0.01	Invention
113	4.0	2.6	Δ	\times	0.01	0.01	Comparative Example
114	4.0	2.6	O	O	0.01	0.01	Invention
115	4.0	2.6	Δ	\times	0	0.02	Comparative Example
116	4.0	2.6	O	O	0.04	0.04	Comparative Example
117	4.0	2.6	Δ	\times	0.01	0.06	Comparative Example
118	4.0	2.6	O	O	0.05	0.08	Comparative Example

The results of Table 101 indicate that the photothermographic materials of the invention are excellent in unprocessed stock storability and image storability, which do not deteriorate even though the silver saving agent is used, and exhibit preferable tone and film physical property. On the other hand, when the silver iodide composition (the content of the silver iodide) is not within the range of the invention, deterioration in the unprocessed stock storability and the image storability is caused due to the

use of the silver saving agent, which will cause a problem in practical use.

Experiment 2

Photothermographic materials were prepared in the same manner as Photothermographic material 21 in Table 3, Example 1 of the specification, except that the silver saving agent is changed to Compound 6-1-6, 6-3-6, 6-12-4, 6-33-3, 6-72-12, 6-73-3.

Performances of the photothermographic materials thus obtained were evaluated in the same manner as in Example 1 of the specification, and the similar results and effects to Photothermographic material 21 were obtained.

Conclusions

The present invention showed excellent photographic performances, film physical property, unprocessed stock storability and image storability.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DATE: June 6, 2005

Kouta Fukui
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